**BEFORE THE**
**FEDERAL COMMUNICATIONS COMMISSION**
**WASHINGTON, D.C. 20554**

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| In the Matter of | ) | |
| | ) | |
| Service Rules for the 698-746, 747-762 and 777-792 MHz Bands | ) | WT Docket No. 06-150 |
| | ) | |
| Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems | ) | CC Docket No. 94-102 |
| | ) | |
| Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones | ) | WT Docket No. 01-309 |
| | ) | |
| Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services | ) | WT Docket No. 03-264 |
| | ) | |
| Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules | ) | WT Docket No. 06-169 |
| | ) | |
| Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band | ) | PS Docket No. 06-229 |
| | ) | |
| Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010 | ) | WT Docket No. 96-86 |

**REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING**

**Adopted: April 25, 2007** **Released: April 27, 2007**

# COMMENTS OF THE REGION 22 (MINNESOTA) 700 MHz PUBLIC SAFETY REGIONAL PLANNING COMMITTEE

## I. INTRODUCTION

At a special meeting held on May 22, 2007 in St. Paul, Minnesota, the Region 22 (Minnesota) Public Safety Regional Planning Committee (MN-RPC) passed a Resolution approving these comments regarding the above captioned matters addressed in the Report and Order and Further Notice of Proposed Rulemaking, FCC 07-72 (Further Notice), adopted by the Commission on April 25, 2007.

## II. SUMMARY OF COMMENTS

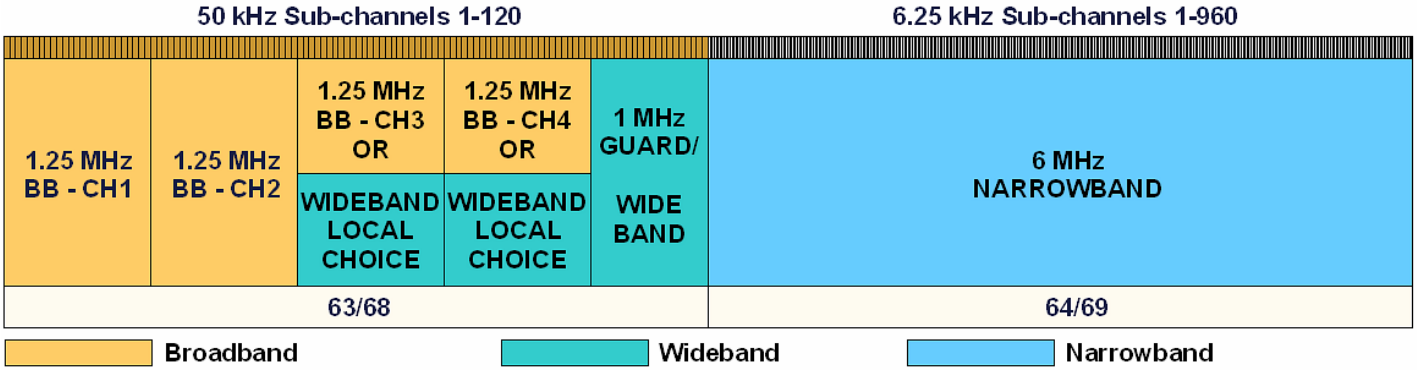
The MN-RPC comments are primarily focused on recommending an enhanced hybrid band plan, the "Broadband with Limited Wideband Flexibility Plan," that will support both a nationwide public safety broadband system and limited local flexibility to deploy wideband technology where it is needed. MN-RPC offers an example of a realistic migration path from wideband to broadband in a large urban area, along with specific interoperability strategies and tools to enhance the success of the nationwide broadband initiative. Further, MN-RPC offers critical comments relating to the following specific statements contained in the Further Notice[1], particularly with respect to the harsh impacts to rural public safety agencies and those which have already committed to deploying wideband systems.

- "The Further Notice tentatively concludes to redesignate the wideband spectrum to broadband use that would be consistent with a nationwide interoperability standard, and to prohibit wideband operations on a going forward basis."
- "The Commission has issued no licenses for wideband channels."
- "Furthermore, although two special temporary authorizations (STAs) have been issued for wideband operations, to the extent a public safety entity has constructed, deployed and is currently operating, as of the release date of the accompanying Report and Order, a wideband system pursuant to a grant of STA, and has reason to continue such operations beyond the current term of the STA, the Further Notice states that the Commission will work with such entity to extend such authority."

In these comments, the MN-RPC urges the Commission to act in support of the overwhelming comments submitted by public safety agencies from throughout the country pleading for local control and flexibility to implement both broadband and wideband. We further urge the Commission to preserve the tens of millions of dollars of investments already made in 700 MHz systems including wideband data systems; to avoid creating an environment which inhibits future collaboration among public safety and manufacturer communities in developing new standards based technologies; and most importantly to avoid causing great harm and disadvantage to rural public safety agencies whose wireless data needs will not be met if wideband data solutions are prohibited.

## III. DISCUSSION

### A. MN-RPC PROPOSES THE FOLLOWING "BROADBAND WITH LIMITED WIDEBAND FLEXIBILITY PLAN" FOR THE 700 MHZ PUBLIC SAFETY SPECTRUM.




[1] Appendix D at 24 of FCC 07-72.

**Proposed usage & limitations:**

- Broadband channels 1 – 4 and the 1 MHz wide internal guard band (12 MHz total – TV channels 63 & 68) would be channelized into 50 kHz sub-channels. Aggregation of multiple 50 kHz channels up to 150 kHz would be permitted for wideband, and up to 5 MHz for broadband.
- Broadband channels 1 & 2 would only be allowed for new broadband systems conforming to the nationwide public safety broadband technology standard that are part of, or interfaced with, the new nationwide system.
- Use of the 1 MHz internal guard band would be permitted for wideband systems on a secondary non-interference basis to adjacent operations outside the guard band.
- Broadband/ wideband "Flex" channels 3 & 4 would be flexible wideband and/or broadband channels based on plans developed by the local 700 MHz Regional Planning Committees.
- Flex channels 3 & 4 would be used for either broadband systems conforming to the nationwide public safety broadband technology standard, or alternatively for locally deployed wideband systems.
- Use of Flex channel 3 for wideband would require a showing that the need for wideband in a given region cannot be accommodated within Flex channel 4 and the internal guard band.
- Broadband systems would be constructed beginning with the lowest available channel and wideband systems would be constructed beginning with the highest available channel.

**The advantages of this band plan are many and include:**

- A minimum of 2 and up to 4 – 1.25 MHz broadband channels may be aggregated together in the lower public safety segment to provide the needed dedicated spectrum for use in the nationwide broadband system.
- The 2 – 1.25 MHz broadband/ wideband Flex channels at the upper end of the broadband segment, plus the adjoining 1 MHz internal guard band, could alternatively be used for local wideband system deployment which would serve immediate needs until the broadband system is implemented in a given area, and long term needs in remote areas where broadband may never reach.
- Since all 4 – 1.25 MHz channels will not be needed for broadband in all geographic areas until well into future, this approach permits more efficient use of the spectrum in a shorter time frame when and where needed.
- Existing and pending public safety investments in wideband solutions would be preserved, and relatively high data rate systems would be within the reach of even rural public safety agencies in the short term, rather than at the end of a proposed 10 year build out schedule for the E block winner which may only reach 75% of the continental US landmass.
- This broadband with limited wideband flex plan meets the goals of the Commission's vision on a forward looking basis while maintaining continuity with the regulatory development framework established over the past decade in this docket. Maintaining this regulatory development continuity with respect to wideband is critical to preserve public safety agencies' confidence in the Commission's decision making processes and public safety's willingness to move forward with ANY technology investments.
- This approach also avoids the potential complications with establishing a buyout/ reimbursement plan for incumbent wideband systems which have been deployed or are under construction.

## B. 700 MHZ WIDEBAND TO BROADBAND URBAN AREA MIGRATION EXAMPLE.

By advocating provisions for wideband and limited local flexibility, MN-RPC is not opposing broadband. To the contrary, numerous public safety agencies in the Twin Cities Metropolitan Area represented on the MN-RPC are actively planning for migration to the future public safety broadband network. The following steps are envisioned for such a migration in the Twin Cities:

- Deploy a wide area standards based (TIA-902) wideband data system serving the entire region (phase I completed, temporarily operating on 700 MHz – 25 kHz narrow band channels.)
- Upgrade the system to full 50 kHz operation and reprogram to wideband authorized channels (contracted for mid 2008 – FCC wideband license applications based on the current band plan are currently in the pending status in ULS.)
- Monitor development of FCC service rules for the proposed E block, engage with the future auction winner to discuss build out strategies and timelines (mid to late 2008.)
- Participate in and monitor the national broadband standards setting process, system requirements definition, system oversight governance discussions, etc. (2007-2009.)
- Engage with public safety broadband construction entity regarding antenna site sharing agreements, backhaul networks, network interfaces, subscriber agreements, etc. (2008-2010.)
- Participate in system testing, coverage evaluation, commissioning and integration with local public safety systems (2011-2012.)
- Begin deploying subscriber units in the new public safety broadband system. Retain wideband system for reliability/ redundancy and for coverage into broadband coverage holes. (2012-2013, assuming the Twin Cities is part of the initial construction phase.)
- Consolidate the wideband system into Flex channel 4 and reallocate Flex channel 3 to broadband as users begin to migrate off the wideband system (2012-2014.)
- Consolidate the wideband system into the guard band and reallocate Flex channel 4 for broadband use as additional users migrate off the wideband system (2014-2015.)
- Once the broadband system is stable, metropolitan area broadband coverage deficiencies are resolved, and the wideband fleet has been fully migrated, the wideband system would be decommissioned and either relocated to rural areas where broadband has not yet reached, or the infrastructure hardware would be re-tasked into the region's P-25 voice system (2015-2017.)

## C. ADDITIONAL STRATEGIES BEYOND A SINGLE NATIONWIDE BROADBAND SYSTEM FACILITATING DATA INTEROPERABILITY AND UNIVERSAL ACCESS.

While the vision of establishing a unified single nationwide broadband network as the centerpiece of achieving public safety interoperability is a worthy one, a single wireless network alone cannot achieve this desired outcome. Time and time again the notion of "build it and they will come" has proven to be wishful thinking. The reality is that there are largely disparate operational needs, financial resources, terrain, population densities, suitability and ages of existing systems, and many other factors that result in a fragmented and heterogeneous set of user needs and resulting solutions. Many agencies will construct or retain independent systems for a variety of reasons. The interoperability solution for public safety wireless data is multifaceted and complex and needs to accommodate differing technologies and systems. While the nationwide network will meet many and perhaps most needs, strategies to bridge multiple technologies are required. In addition to the nationwide broadband transport network, some of these current strategies and tools will continue to be applicable:

- 4.9 GHz ad-hoc mesh type networks for localized, high intensity incident response including provisions for real time full motion video, robotics, advanced sensor information, etc.
- Wideband and narrow band data networks economically supporting text and graphics based applications over large geographic areas including sparsely populated rural areas.
- Wideband modems/ radios with card slots for piggy backing a nationwide broadband modem.
- Hand held and mobile client devices (computers) with card slots for a nationwide broadband modem.
- Middleware/ mobile routers to enable automatic switching between multiple wireless devices and systems including WiFi, mesh, wideband, PS broadband, commercial wireless, etc.
- Commonality at the application level with interoperability messaging servers.
- Data broker servers providing data exchange among different databases and applications.

The current proposal contained in the Further Notice prohibiting wideband will actually inhibit interoperability by excluding an important RF tool that can be used to provide data connectivity to public safety personnel serving areas that broadband does not reach.

**D. COMMENTS OF CONCERN REGARDING SPECIFIC STATEMENTS CONTAINED IN THE FURTHER NOTICE.**

***"The Further Notice tentatively concludes to redesignate the wideband spectrum to broadband use that would be consistent with a nationwide interoperability standard, and to prohibit wideband operations on a going forward basis."***

- MN-RPC believes it is absolutely essential for Regional Planning Committees, which are best positioned to evaluate solutions for local first responder agencies while weighing competing needs for spectrum, to have a reasonable degree of flexibility to utilize wideband systems in order to meet critical public safety needs that are not met by the future broadband system.
- While much has been made of the potential future virtues of broadband technology, it remains to be demonstrated that wireless broadband, which requires a very dense infrastructure to achieve acceptable geographic coverage, is economically feasible in non-urban areas. In fact, the build out requirements proposed by Frontline would insure that it would be over a decade from now until only 75% of the continental US landmass is covered by their proposed broadband system[2]. Public safety agencies typically require between 95% to 97% area coverage throughout their service areas. Obviously a solution other than broadband is needed for the next 10 years and to fill in the remaining 25% even beyond that - and that solution is wideband.
- Wideband technologies can provide a very large geographic coverage footprint, with cell edge performance characteristics comparable to broadband, for a fraction of the infrastructure development costs of broadband. Unlike broadband, the spectrum, technology standards and funding is currently available to immediately deploy wideband systems. Such wideband systems could provide important services for public safety until such time that broadband is available in a given area. Prohibiting wideband translates to prohibiting high speed wireless data of any kind for much of rural America for the next 10-12 years or longer.
- If the Commission implements the tentative conclusion stated in the Further Notice to prohibit wideband, rural public safety agencies will be particularly disadvantaged and harmed as a direct result. Many rural agencies are actively pursuing 700 MHz wideband data systems

[2] Frontline comments at 24.

because it is the only technology feasible in those areas for the foreseeable future. As the Commission well knows, implementing a public safety system typically takes several years to accomplish. Numerous wideband systems are currently at various stages of design, procurement, implementation and operation. Millions of dollars have been invested and committed for these wideband systems. Both urban and rural agencies will be harmed because their investments will be wiped away by Commission rulemaking preventing them from operating these systems. The rural agencies will be further harmed because the proposed nationwide system will not reach their area for at least 10-12 years, if ever. This will relegate them to either no wireless data capabilities whatsoever, or operating low speed narrowband data systems supporting only text and limited graphics (Tier 1) data applications.

***"The Commission has issued no licenses for wideband channels."***

- MN-RPC believes this statement, particularly when used as rationale to minimize potential impacts to public safety entities, is misleading because it fails to recognize the fact that numerous public safety agencies have been frustrated at their inability to receive license grants for wideband systems. The Further Notice failed to acknowledge that numerous wideband license applications and requests for Special Temporary Authorization have in fact been filed and are currently "pending" issuance in the Commission's Universal Licensing System. Comments filed by Dataradio observed that the Commission appears to have been holding such applications for wideband licenses in abeyance[3]. Failing to act on legitimately submitted wideband applications for well over a year in the absence of any authorized licensing freeze can hardly be used to demonstrate that there is no interest or value to public safety in wideband systems, or to imply that incumbent public safety entities do not exist and will therefore be unaffected.
- In Region 22 alone, no less than four wideband systems have been purchased and deployed over the past few months. Wideband license applications and/or STA requests are currently pending before the Commission from the Counties of Hennepin, Mower, Sherburne, Washington and the Metropolitan Emergency Services Board (a consortium of 8 counties.) An additional wideband license application is currently in process from Clay County.
- On December 22, 2006 the Counties of Hennepin and Washington and the Metropolitan Emergency Services Board withdrew an expedited request for temporary rule waivers regarding use of 50 kHz wideband data channels for a region-wide system, originally submitted on April 14, 2006 due to unacceptable delays (over 8 months) by the Commission in acting on the request[4]. The subject wideband system is now temporarily licensed and operating on 25 kHz narrowband 700 MHz channels. This system was purchased as a wideband system and is under contract to be upgraded to full 50 kHz wideband operation in mid 2008. Wideband license applications for this operational system, without waiver requests, were accepted by the Commission and placed into the "pending" queue prior to the issuance of the Further Notice. While the wording of the Further Notice would appear to treat this system as a narrowband system, it is in fact committed in contract as a TIA-902 wideband data system, has wideband licenses pending in ULS, and should therefore be treated as an incumbent wideband system.
- Submission of applications for FCC radio station licenses often does not occur until after the system purchase contract has been executed and the detailed design review has been completed (several years into a typical public safety system procurement process.) Applicants must also wait until the FCC has approved of their respective 700 MHz Regional Plan before submitting

[3] Comments of Dataradio at 5, February 28, 2007 in WT docket 96-86.
[4] DA 07-423.

applications. Observing that the Commission has not yet issued any licenses is by no means a valid measure of the investments and commitments made to date by public safety agencies in purchasing wideband systems.

***"Furthermore, although two special temporary authorizations (STAs) have been issued for wideband operations, to the extent a public safety entity has constructed, deployed and is currently operating, as of the release date of the accompanying Report and Order, a wideband system pursuant to a grant of STA, and has reason to continue such operations beyond the current term of the STA, the Further Notice states that the Commission will work with such entity to extend such authority."***

- In the event the Commission decides against the compelling comments expressed by numerous public safety practitioners to retain local flexibility and ultimately prohibits wideband on a going forward basis, the MN-RPC urges the Commission to entitle public safety agencies which have purchased, constructed or deployed, as of the future effective date of any new Rulemaking, a wideband system pursuant to either an STA or license application pending before the Commission, to either: (1) Issuance of station authorizations and be afforded a reasonable system life cycle up to ten years including expansion of those systems; or (2) Compensation to relocate or terminate public safety wideband operations by the proposed E block auction winner as part of the costs to implement the nationwide public safety broadband system. Such costs to buy out these incumbent wideband systems would be relatively small for the E block winner but substantial for each of the incumbent public safety entities which have purchased those systems. Precedent for such compensation is established in the 800 MHz Report and Order dealing with rebanding[5].
- It would be grossly unfair and clearly contrary to the public interest for public safety entities which have proceeded in good faith with system planning, budgeting, design, procurement and implementation of 700 MHz wideband data systems based on existing FCC Rules, approved Regional Plans, and in alignment with the established regulatory development framework in this Docket prior to issuance of the 9th NPRM (including the FCC's prior tentative decision to establish TIA-902 as the wideband interoperability standard,) to now be preempted after the fact from operating those systems. In the case of the Twin Cities Metropolitan Area TIA-902 wideband system, over $8 million in public funds have been expended to implement this operational system, which is now in jeopardy due to the Commission's tentative conclusion to usurp existing approved 700 MHz Regional Plans, disregard incumbent wideband systems, and to effectively outlaw wideband systems.
- In addition, an issue exists whereby equipment manufacturers have substantial sunk costs in developing wideband products based upon the regulatory development framework and adopted FCC rules. Failing to address this issue would negatively impact public safety because: (1) It would serve as a strong disincentive for future partnerships between the public safety and manufacturer communities to move forward with public safety driven standards and product development such as TIA-102 (Project 25) and TIA-902 (Wideband Data); and (2) It could substantially extend product development schedules in order to minimize manufacturer risk.

[5] WT Docket No. 02-55.

## IV. CONCULUSION

**The Region 22 (Minnesota) 700 MHz Public Safety Regional Planning Committee urges the Commission to expeditiously adopt the "Broadband with Limited Wideband Flexibility Plan," establish an aggressive retuning schedule for existing 700 MHz operations, and begin acting immediately on the backlog of wideband license applications pending before it.**

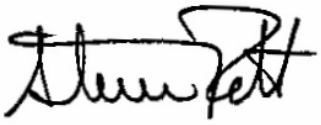
The "Broadband with Limited Wideband Flexibility Plan" put forth by MN-RPC represents a reasonable compromise balancing a future vision for broadband with the viability of today's wideband solution. Wideband technology fits a critical need for public safety data communications due to its immediate availability, geographically long reach and relative affordability compared to broadband. Wideband can be accommodated as a transitional technology without impairing the development of the proposed nationwide public safety broadband system.

Multiple land mobile radio manufacturers and public safety entities alike have invested substantial financial and personnel resources over the last 10 years developing wideband technologies, regional 700 MHz plans, and have begun to construct and operate 700 MHz wideband systems. These investments could be simply washed away with a stroke of the regulatory pen. The Commission's long standing expectation that the manufacturer and public safety communities will continue to work collaboratively to develop and implement new technologies based on a well crafted and consistent regulatory development process would suffer from such action. A sudden and disconnected turnabout with respect to permitting wideband operations and the related selection of TIA-902 as the wideband interoperability standard would not only frustrate public safety interoperability, but will act as a strong disincentive for future technology innovation and systems investment.

We urge the Commission to support the substantial and overwhelming record of comments filed in this matter by public safety agencies and their associations to preserve a degree of local flexibility for wideband technologies in addition to new opportunities for broadband. We further urge the Commission to be responsive and strike a balance among competing interests by facilitating complimentary solutions that not only embrace innovation, but leverage the valuable efforts and investments made to date.

Respectfully Submitted,

**Region 22 (Minnesota)**
**Public Safety Regional Planning Committee**



Steve Pott, Chair